Snyder Creek Culvert
Spanning Snyder Creek, on Going-to-the-Sun Road
Glacier National Park
Flathead County
Montana

HAER No. MT-71

WEST GLACIER

HAER
MONT,
15-WEGLA,
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PHOTOGRAPHS
WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
National Park Service
Department of the Interior
Washington, DC 20013-7127

HISTORIC AMERICAN ENGINEERING RECORD

HAER MONT, 15-WEGLA, 1D-

SNYDER GREEK GULVERT
HAER MT-71

Location: Spanning Snyder Creek on the Going-to-the-Sun Road, approximately eleven miles northeast of the park entrance at West Glacier, Glacier National Park, Flathead County, Montana
UTM: Lake McDonald West Quad. 12/287430/5391850

Date of Gonstruction: 1936

Structural Type: Reinforced concrete slab culvert

Gontractor: W.K. Trippet, Whitefish, Montana

Engineer: Bureau of Public Roads

Owner: Glacier National Park

Use: Road culvert

Significance: The Snyder Greek Gulvert is one of approximately seventeen prominent masonry and concrete structures on Going-to-the-Sun Road in Glacier National Park. The 51-mile stretch of scenic road is significant as a unique engineering accomplishment of the early twentieth century, and as the first product of a 1925 cooperative agreement between the National Park Service and the Bureau of Public Roads. As in other structures on the road, the designers of the Snyder Creek Gulvert used a masonry arch facade in an attempt to make the structure blend with the park scenery.

Project Information: Documentation of the Snyder Creek Gulvert is part of the Going-to-the-Sun Road Recording Project, conducted during the summer of 1990 under the co-sponsorship of HABS/HAER and Glacier National Park. Researched and written by Kathryn Steen, HAER Historian, 1990. Edited and transmitted by Lola Bennett, HAER Historian, 1992.

For measured drawing, see HAER MT-67B, sheet 2.

Going-to-the-Sun Road

The Snyder Greek Gulvert is a 20-foot reinforced concrete slab culvert with a masonry arch facade, one of a number of concrete and masonry structures along Going-to-the-Sun Road, a scenic park road that winds through the spectacular mountains and valleys in the middle of Glacier National Park. The 51-mile road, built in sections between 1911 and 1933, and rebuilt during the next two decades, runs east and west through the park. Starting in the west, the road runs from West Glacier, along the 10-mile eastern shore of Lake McDonald and then up McDonald Greek for an additional ten miles. About one mile beyond the junction with Logan Greek, the road begins its ascent to Logan Pass. The road climbs at a 6-percent grade, passes through a tunnel, and turns at a major switchback called "The Loop." Following the contours of the sides of Haystack Butte and Pollock Mountain, the road passes over several bridges, culverts, and retaining walls, before reaching Logan Pass. Beyond the Pass, the road descends to the east along the sides of Piegan Mountain and Going-to-the-Sun Mountain before running along the north shore of St. Mary Lake. The road exits the park as it crosses Divide Greek near St. Mary, Montana.[1]

Significance of the Road

The Going-to-the-Sun Road is significant as an outstanding engineering feat of the early twentieth century. In addition, the road was the first product of the interagency cooperative agreement between the National Park Service (NPS) and the Bureau of Public Roads (BPR). The agreement, signed in 1925, allowed the National Park Service to utilize the roadbuilding expertise of the Bureau of Public Roads while still retaining control to protect the landscape.[2]

Snyder Greek

In 1933, the park formally celebrated the opening of the Going-to-the-Sun Road. Even as they noted their achievement, however, the BPR and NPS had plans for major reconstruction on the parts of the road built before 1925. About 20 miles on the west end and 8 miles on the east end of the road had narrower roadways, tighter curves, and log structures. Reconstruction on the west side began early in 1935, and during the next three construction seasons, the Going-to-the-Sun Road was improved from West Glacier to about a mile east of Logan Creek with a series of contracts. W.K. Trippet of Whitefish, Montana, won one of the contracts with a low bid of $48,134. Trippet's contract obligated him to construct three structures--a bridge over Avalanche Creek, and two bridge/culverts over Snyder Creek. The bids were opened August 10, 1935, and Trippet started on Avalanche Greek Bridge the fall of 1935, and finished all three structures the following year.[3]

Only one of the Snyder Greek Gulverts was part of the Going-to-the-Sun Road; the other crossed the creek in the Lake McDonald Hotel area. During the summer of 1936, traffic flowed over the old log Snyder Greek Bridge near Lake McDonald Hotel. One of the other contractors on the Going-to-the-Sun Road

reconstruction was in the process of constructing a new alignment of the road near the hotel. The contractor set the new road farther south from the hotel and Lake McDonald. Trippet constructed his mainline Snyder Creek Culvert on the new alignment, and therefore did not have to make alternate arrangements for tourist traffic.[4]

Trippet began excavation for the mainline culvert in the spring of 1936, but was slowed by the spring runoff. In mid-July, the contractor poured the reinforced concrete footings. A month later, Trippet placed the ringstones and poured the reinforced concrete slabs. At the end of August, he attached the curbs and railing and finished the project with a hand-laid riprap along the creek's banks.[5]

As a result of the agreement in 1925 between the National Park Service and Bureau of Public Roads, all subsequent contracts contained clauses designed to protect the landscape and make the structures blend into the natural environment. In particular, the specifications required the contractor to use construction materials native to the park.[6] During the reconstruction of the 1930s, many of the west side contractors, including Trippet, quarried their rock along the side of the road in the cliffs near the Haystack Creek Culvert.[7]

Another proviso of the contract, resulting from the Depression and the New Deal, obligated Trippet to hire his unskilled and semi-skilled labor from the National Reemployment Service. Much of his skilled labor also came through the agency. Each laborer was limited to forty hours of work per week and received a guaranteed minimum wage. Unskilled workers earned $.60 per hour, semi-skilled earned $.75 per hour, and the skilled workers earned a minimum of $1.00 per hour, although Trippet paid skilled laborers $1.15.[8]

Description

The Snyder Creek Culvert is a reinforced concrete slab culvert with a masonry arch facade and masonry facing on the abutments. The culvert spans 20'-0" over Snyder Creek, which flows under the culvert at 20 degrees off perpendicular. The entire culvert is 65'-4" long and has a 24' roadway and 4' sidewalks on either side.

ENDNOTES

1. See the Historic American Engineering Record report HAER MT-67 on the Coing-to-the-Sun Road.

2. C.H. Purcell, F.A. Kittredge, J.A. Elliott, T.C. Vint, and C.J. Kraebel, Suggested Procedure for Cooperation Between the National Park Service and the Bureau of Public Roads in Major Traffic-Way Projects within the National Parks, April 22, 1925 (Record Group 79, National Archives, Washington, D.C.)

3. A.V. Emery and John Zoss, "Final Construction Report on Glacier National Park, Transmountain Highway, West Side, Project NR 1-A, Unit 1, Reconstruction, Grading and Draining, and Project 1-A, Unit 1, Bridges," July 28, 1939 (Clacier National Park Library Historical Files).

4. Emery and Zoss, "Final Construction Report."

5. Emery and Zoss, "Final Construction Report."

6. Purcell, et al, Suggested Procedure.

7. Emery and Zoss, "Final Construction Report."

8. Emery and Zoss, "Final Construction Report."

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Emery, A.V. and John Zoss. "Final Construction Report on Glacier National Park, Transmountain Highway, West Side, Project NR 1-A, Unit 1, Reconstruction, Grading and Draining, and Project 1-A, Unit 1, Bridges," July 28, 1939. (Glacier National Park Library Historical Files).

Historic American Engineering Record. "HAER MT-67: Going-to-the-Sun Road." (Library of Gongress, Washington, D.C.)

Purcell, C.H., F.A. Kittredge, J.A. Elliott, T.C. Vint, and C.J. Kraebel. Suggested Procedure for Cooperation Between the National Park Service and the Bureau of Public Roads in Major Traffic-Way Projects Within the National Parks. April 22, 1925 (Record Group 79, National Archives, Washington, D.C.)